Lending Club Case Study

Group Facilitator   : Ramasubramanian P

Team Member   : Punjal Agarwal

Problem Statement

Objective:

Identify patterns which indicate if a person is likely to default a loan, using consumer and loan attributes, with the business objective of avoiding financial loss.
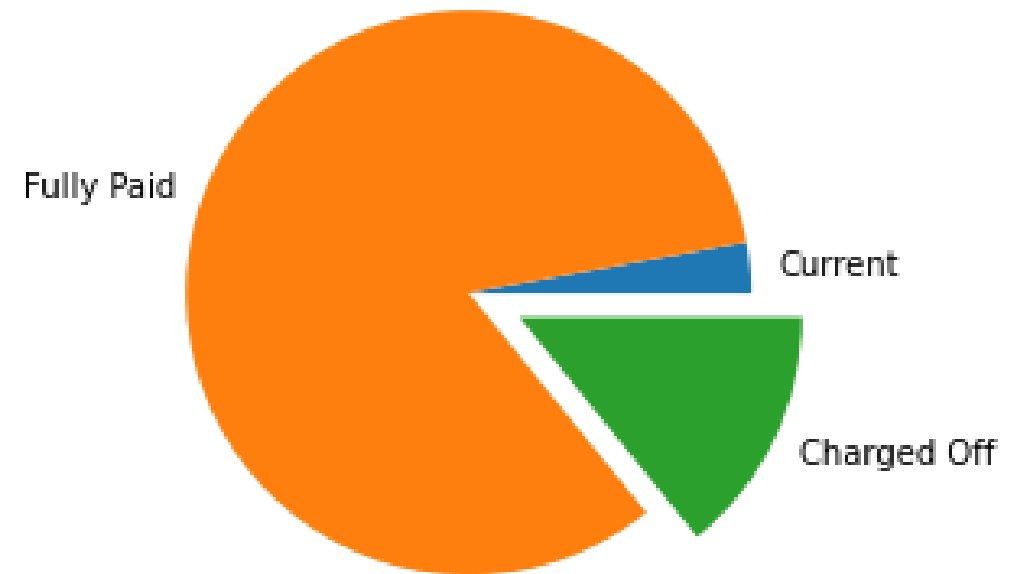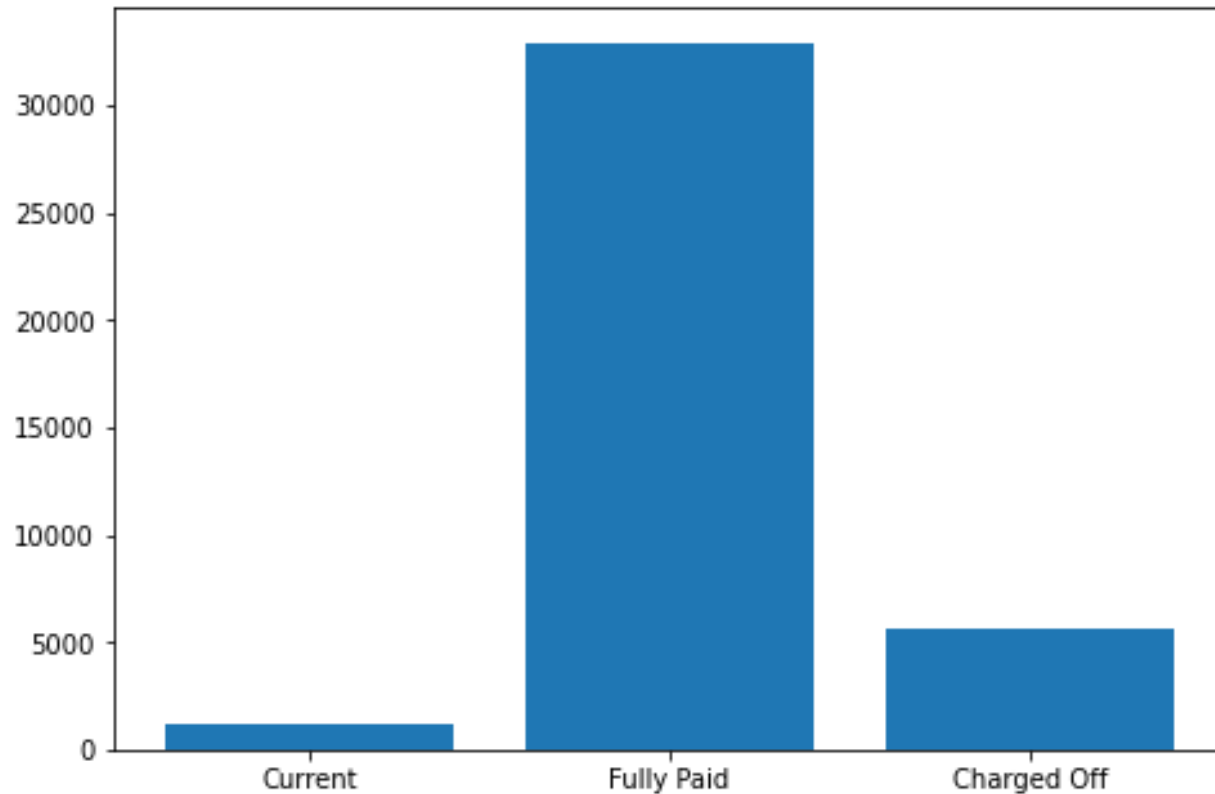
Expected Outcome of Analysis:

Understand the driving factors behind loan default

Decision on actions to be taken – denying the loan, reducing the loan amount, lending at higher interest etc.
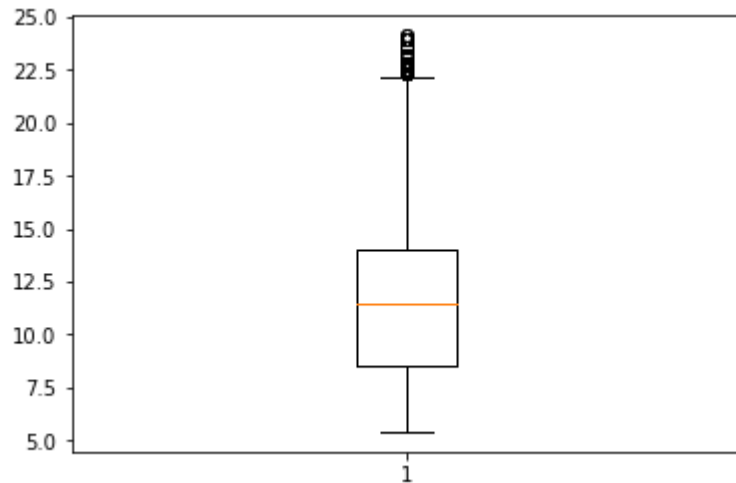
Analysis

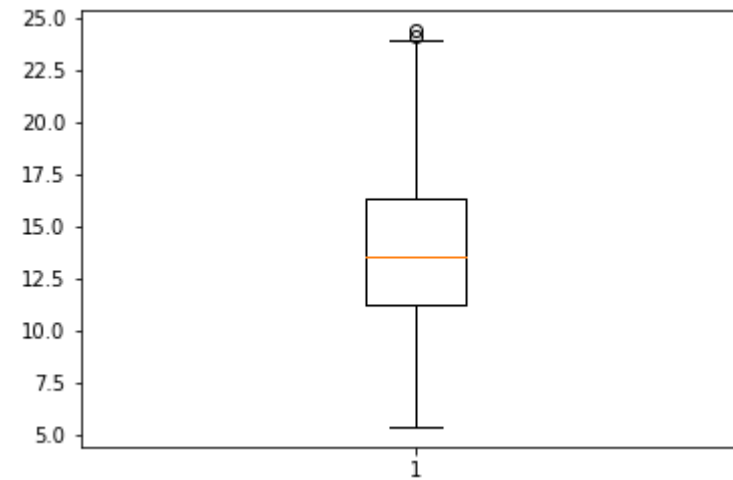- % of charged off or Defaulted : 14%

Analysis – Interest Rates

- Fully Paid


```
count    32950.000000
mean        11.609761
std          3.599964
min          5.420000
25%          8.490000
50%         11.490000
75%         13.990000
max         24.110000
```
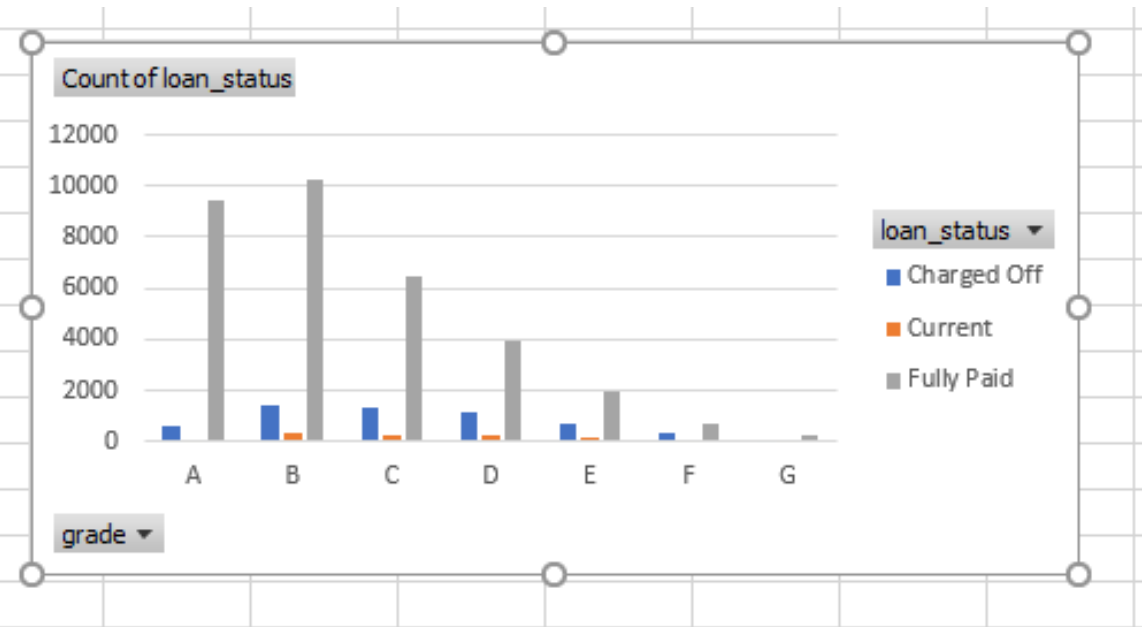
- Charged Off


```
count     5627.000000
mean        13.820432
std          3.654413
min          5.420000
25%         11.310000
50%         13.610000
75%         16.400000
max         24.400000
```
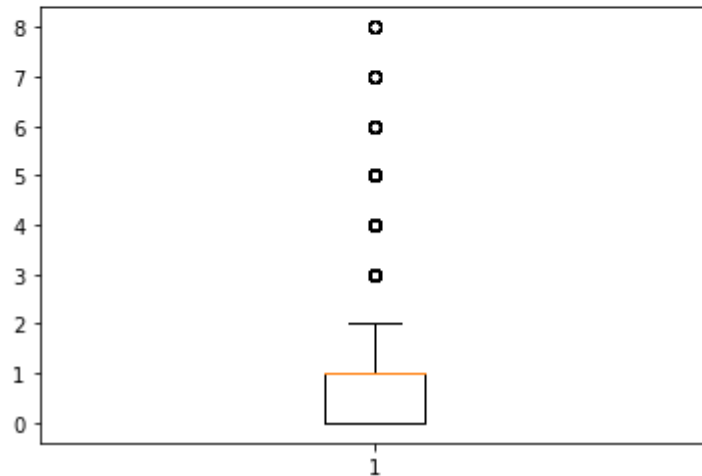
Analysis – Grades

Count of loan_status	Column Labels			
Row Labels	Charged Off	Current	Fully Paid	Grand Total
A	602	40	9443	10085
B	1425	345	10250	12020
C	1347	264	6487	8098
D	1118	222	3967	5307
E	715	179	1948	2842
F	319	73	657	1049
G	101	17	198	316
Grand Total	5627	1140	32950	39717

Analysis – Inquiries in last 6 months

- Fully Paid

- Charged Off
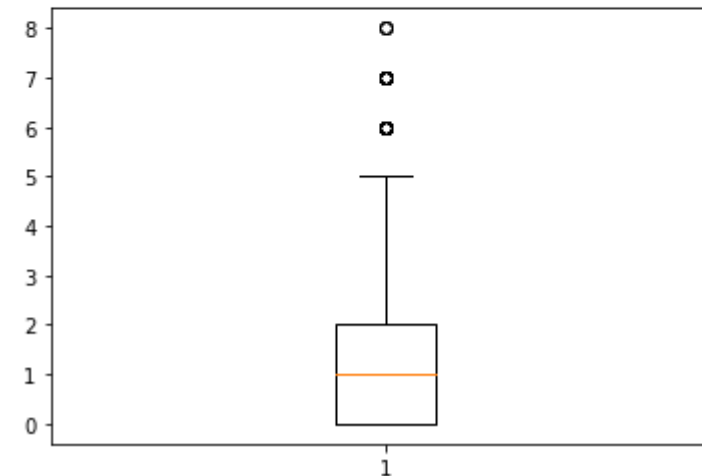
```
count    32950.000000
mean         0.839909
std          1.053524
min          0.000000
25%          0.000000
50%          1.000000
75%          1.000000
max          8.000000
Name: inq_last_6mths, dtype: float64
```
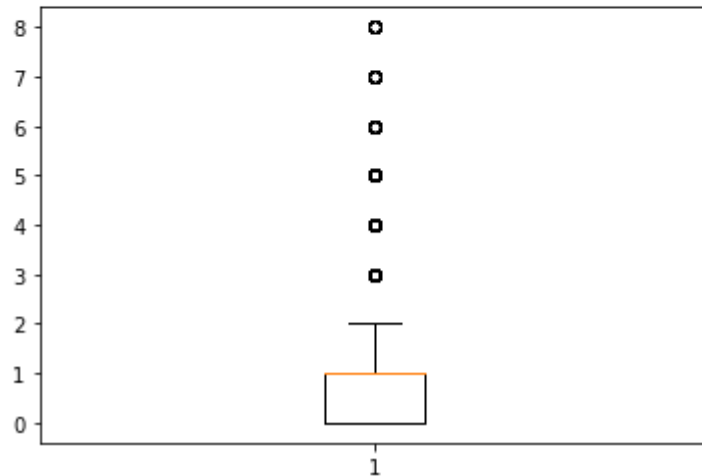
```
count     5627.000000
mean         1.058113
std          1.154136
min          0.000000
25%          0.000000
50%          1.000000
75%          2.000000
max          8.000000
Name: inq_last_6mths, dtype: float64
```
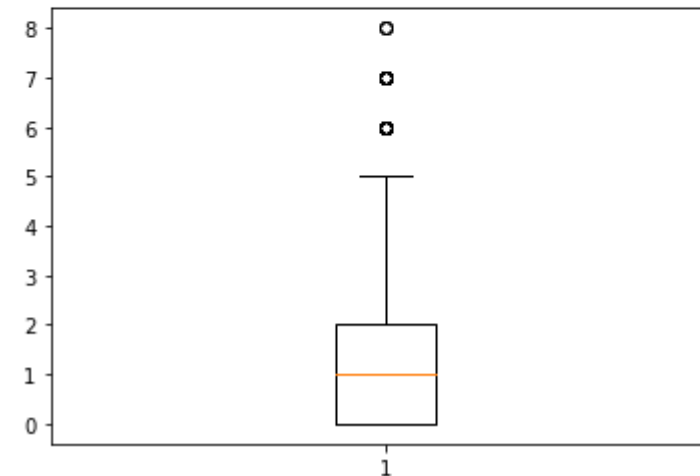
Analysis – Inquiries in last 6 months

- Fully Paid

- Charged Off

```
count    32950.000000
mean         0.839909
std          1.053524
min          0.000000
25%          0.000000
50%          1.000000
75%          1.000000
max          8.000000
Name: inq_last_6mths, dtype: float64
```

```
count     5627.000000
mean         1.058113
std          1.154136
min          0.000000
25%          0.000000
50%          1.000000
75%          2.000000
max          8.000000
Name: inq_last_6mths, dtype: float64
```

Results

- There are just over 14% defaulters
- Little higher percent of defaulters have RENTED house
- More percentile of defaulters have higher loan enquiries in the past 6 months.
- Defaulters have higher revolving balance and utilization.